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DIPLACUS LONGIFLORUS RUTILUS

BUSH MONKEY-FLOWER

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RANCHO SANTA ANA BOTANIC GARDEN
of the
NATIVE PLANTS OF CALIFORNIA
Santa Ana Cañon, Orange County, California
Established 1927 in Memory of
JOHN W. BIXBY

DIPLACUS LONGIFLORUS RUTILUS
BUSH MONKEY-FLOWER

Scrophulariaceae Figwort Family

Evergreen, soft-wooded shrub 3-4 ft. high, usually equally broad, herbage more or less glandular-pubescent, especially when young. Leaves opposite, linear, 2-3 in. long, with small teeth hidden by the revolute margins, pinnately veined, upper surface rugose, dark green, glutinous, lower surface light green, glandular-pubescent. Flowers solitary in the upper axils, but abundant on the individual branchlets, thus appearing as a many-flowered, leafy-bracted raceme; pedicels less than $\frac{1}{4}$ in. long; calyx $1\frac{1}{4}$ in. long, narrowed at base, expanded upward, 5-angled, the lobes unlike, with a lower pair about $\frac{1}{4}$ in long, an upper pair slightly longer and a 5th, or upper, nearly $\frac{1}{2}$ in. long; corolla dark velvety-red to orange-red, 2-lipped, 2-$2\frac{1}{4}$ in. long, the tube about $\frac{3}{4}$ in. long, $\frac{1}{8}$ in. thick, expanded into a saccate throat nearly $\frac{1}{2}$ in. across at its summit and leaving 2 longitudinal, linear ridges along its lower inside surface, upper lip erect, $\frac{3}{4}$ in. high, its 2 lobes irregularly wavy-margined or fringed, lower lip smaller, about $\frac{1}{2}$ in. long, composed of 3 lobes parallel with the throat or slightly spreading; stamens 4, inserted in corolla tube, with filaments about $\frac{1}{2}$ in. long, and 2-celled anthers, filaments of lower pair a little longer than the upper, all closely appressed to upper surface of corolla throat; ovary 2-celled, about $\frac{1}{4}$ in. long, slender, prolonged into the 1 in. single style at end of which are 2 broad stigma lobes about $\frac{1}{8}$ in. long, stigmate on their inner faces and closing upon each other when irritated. Mature capsule linear-oblong, about $\frac{1}{2}$ in. long, generally hidden by the dried calyx, rupturing longitudinally, usually along one side only, and tardily shedding the almost microscopic seeds, which under a lense are oblong, apiculate and have a muriculate surface. In germination the seedlings are minute, but the cotyledons enlarge and bear triangular blades nearly $\frac{1}{4}$ in. long, abruptly contracted to petioles $\frac{1}{8}$ in. long; second pair of leaves are toothed but not revolute.

The genus *Diplacus* (from Greek meaning double and cake, in reference to the placentæ of the capsule) was proposed in 1838 by Thomas Nuttall, early American botanist, who a few years before had collected several of the species in California. *Diplacus* consists of 7 or 8 species ranging from southern Oregon to Baja California. These are distinguished from the much larger genus *Mimulus* mainly because of their peculiar placentæ and shrubby habit, but some botanists do not consider these features important enough to keep them separate.

Diplacus longiflorus rutilus (Latin words meaning long-flowered and red to glowing orange-red) was first described in 1924 by Dr. Adele L. Grant as a new variety of *Mimulus longiflorus,* a widespread species mainly of southern California which was first discovered by Nuttall near Santa Barbara and published by him under the generic name of *Diplacus* in 1838. Dr. Grant's variety was based upon material which she had collected in 1920 in Santa Susana Pass, Ventura County. Transfer of her variety from *Mimulus* to *Diplacus* was made by Prof.

McMinn in 1939. Its range is from Santa Susana Pass, to the San Gabriel Mts., and is distinguished by its velvety red flowers. However, throughout its range it is associated with the typical yellow-flowered *D. longiflorus*. Numerous intergrading color forms are found, so that strictly speaking it is an impossibility to segregate the variety *rutilus* unless all of the plants with flowers other than clear yellow are regarded as the variety.

The plants thrive in sheltered, partially shaded habitats on hillsides and canyon bottoms in shales, sandstone, alluvial deposits and decomposed granite. They are commonly associated with the Coast Live Oak or with chaparral species. In April and May they burst forth into flower and in the regions where they grow there are probably no other shrub more colorful or attractive. Soon after the dry summer begins the plants lose most of their leaves, and enter a state of semi-dormancy for the next few months, but promptly begin new growth shortly after the first fall rains.

Our strain of *Diplacus longiflorus rutilus* was obtained from Santa Susana Pass, but the original seeds were collected from plants without flowers so that nearly all the variations between typical *rutilus* and *longiflorus* appeared in the first lot of seedlings.

The seeds of *D. longiflorus rutilus* are so very small that care must be exercised in planting them in flats. They germinate readily and a single flat will yield hundreds of plants. When seeds are planted in the fall the resulting seedlings will be ready to plant out during the winter, will attain heights of 1 to 3 feet the first season and bloom profusely. Propagation is also satisfactory from softwood cuttings, but is suggested only in case specific color variants are wanted, since seedlings are not only quicker, but appear to be more vigorous.

Following spring flowering the plants should not be irrigated and should be permitted to go dormant until fall. Severe pruning as soon as the wood has hardened will not only get rid of the browning leaves, old flowers and capsules which would otherwise remain on the plants throughout the summer, but will insure new vigorous growth for the ensuing season. Under this procedure the plants will thrive for many years, especially if the soil is reasonably well drained and partially shaded. However, it is perfectly feasible to treat this shrub as an annual and grow new plants each season. By varying the time of seed planting from fall to spring the blooming period can similarly be changed so that plants can be brought into full bloom almost any time from spring until fall. Then too, when treated as annuals a partially shaded location is not so essential.

Attempts on our part to grow Bush Monkey-flowers under general garden conditions in rich soil and with frequent irrigations have resulted in failure. On the other hand, young seedlings planted in partially shaded sites in ordinary loam and only watered when first planted out have been highly successful. Few other plants will yield a greater profusion of beautiful flowers for less effort than this one, if its rather simple requirements can be provided.

CARL B. WOLF

RANCHO SANTA ANA BOTANIC GARDEN

Dedication of Garden Foundation to the Board of Trustees for the Rancho Santa Ana Botanic Garden of the Native Plants of California:

"THE NATURE, OBJECT AND PURPOSE OF THE INSTITUTION HEREBY FOUNDED AND TO BE MAINTAINED HEREUNDER.

ITS NATURE: A botanic garden of the native plants of California, herbarium and botanical library, containing living and/or preserved specimens of trees, plants and flowers native to California, and literature relating thereto.

ITS OBJECT: The preservation and improvement of the property now transferred and such property as may hereafter be transferred to the Trustees for those who not only wish to enjoy, but to study, assembled in one accessible locality, native California plants; and for the advancement of science and education with reference to plant life indigenous to the State of California.

ITS PURPOSES: (a) An institution founded primarily for scientific research in the field of local botany.

(b) To preserve the native California flora, try to replenish the depleted supply of some of the rarest plants which are rapidly being exterminated, and bring together in a comparatively small area as complete a collection of the rich store of native California plants as can be grown in this southern section of the state, thereby promoting the general welfare of the people of the state by providing the means for encouraging and carrying on the above mentioned activities in said state and by doing such other things as may be necessary and desirable to carry out the objects hereof."

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